

USSR

PLATONOV, V. V., TRET'YAKOV, N. Ye., FILIMONOV, V. N.

"Infrared Spectra of the OH Groups on the Surfaces of Oxides"

Uspekhi Fotoniki [The Successes of Photonics -- Collection of Works], No 2, Leningrad University Press, 1971, pp 92-129 (Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No 3 B1505 by S. Grigorovich).

Translation: This review is dedicated to the IR spectra of the OH groups on the surfaces of the oxides of Be, Mg, Ca, Zn, Y, Al, Ga, In, Ti, Zr, Hf, Th, Si, Ge, Ta and Ni. Primary attention is given to the following problems: 1) detection and clarification of the specifics of the structure of the hydroxyl cover on the oxides; 2) conditions of removal of water adsorbed in molecular form from the surface and conditions of dehydroxylation of the surface; 3) interaction of OH groups with physically adsorbed molecules. 85 Biblio. Refs.

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007

UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--PROSPECTS FOR ADOPTING CYANIDE FREE TECHNOLOGY FOR CONCENTRATING
COPPER ZINC ORES FROM THE URALS -U-
AUTHOR--(03)--FILIMONOV, V.N., BOCHAROV, V.A., ARZHANNIKOV, G.I.

COUNTRY OF INFO--USSR

SOURCE--TSVET. METAL. 1970, 43(4), 92-3

DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GEOGRAPHIC LOCATION, COPPER ORE, ZINC, ORE BENEFICATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--3004/1904

STEP NO--UR/0136/70/043/004/0092/0093

CIRC ACCESSION NO--AP0132166

UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132166

ABSTRACT/EXTRACT--(U) CP-C- ABSTRACT. THE CYANIDE FREE BENEFICATION OF URAL CU,ZN GRES USING NA SUB2 S AND ZNSO SUB4 TOGETHER WITH SULFOXIDES AS DEPRESSORS UNDER LAB. CONDITIONS IS DESCRIBED. THE METHOD REDUCES THE CONSUMPTION OF REAGENTS BY LARGER THAN 20 KOPECKS PER TON OF PROCESSED ORE, IMPROVES THE QUALITY OF THE WASTE WATER, AND IMPROVES WORKING CONDITIONS.

UNCLASSIFIED

Filimonov, V. S.

Physics,

Bioluminescence

JPRS 56398

30 June 1972

Instrumentation for Studying Bioluminescence

A study of the individual parameters of the bioluminescent field requires the creation of specific instrumentation: special sensors, containers and devices. The article describes a unified complex of instrumentation making possible an easy change in instrument design in accordance with the missions formulated in the course of the research. Functionally the instrument complex consists of on-board recording apparatus and a system of sensors, containers and connecting components. The authors discuss different variants of instruments for measuring bioluminescence at sea designed on the basis of the unified complex: an instrument with passive mechanical excitation of luminescence, an instrument for measuring the spectral characteristics of the bioluminescent field, a bathyphotometer with active excitation of luminescence, etc. The described instrument complex was tested on the 44th voyage of the research vessel "Vityaz'." Using these instruments it was possible to obtain data on the microstructure of the

bioluminescent field and the distribution of plankton in individual regions of the ocean.

(Abstract: "Unified Complex of Instrumentation for Studying the Characteristics of Field Bioluminescence," by I. I. Gitel'zon, I. A. Levin, V. S. Filimonov, A. P. Shevyrnogov, R. N. Utvunnev, Yu. A. Zaporozhny and A. S. Artemkin, Physics Institute Siberian Department USSR Academy of Sciences; Moscow, Okeanologiya, Vol XII, No 2, 1972, pp 343-349) *Geology*

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USSR

UDC 578.087.8+577.472(26)

GITEL'ZON, I. I., LEVIN, L. A., SHEVYRNOGOV, A. P., FILIMONOV, V. S., ARTEMKIN, A. S., UTYUSHEV, R. N., and ZAGORODNIY, Yu. A.

"Measurement of Bioluminescence at Great Depths"

Moscow, Doklady Akademii Nauk SSSR, Vol 191, No 3, 1970, pp 689-692

Abstract: The recording of bioluminescence appears to be the only convenient way at present of studying abyssal organisms directly in their habitat. To carry out such investigations, the Institute of Physics of the Siberian Department of the Academy of Sciences USSR developed a bathyphotometric device with autonomous power supply and recording of signals. Magnetic recording is used for the signals coming from the light receiver. The bathyphotometer consists of two hermetically sealed containers joined together. The larger one holds the light receiver, power supply, program control system, and recording apparatus, while the smaller one holds a flashing lamp with program control and power supply. Measurements made in December 1968, by the research vessel Vityaz' in the Sea of Japan at a depth of 7000-7200 m are briefly described.

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1/2 019 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--MEASUREMENT OF BIOLUMINESCENCE AT MAXIMUM DEPTHS -U-

AUTHOR--(05)-GITELZON, I.I., LEVIN, L.A., SHEVYRNOGOV, A.P., FILIMONOV,
V.S., ARTEMKIN, A.S.
COUNTRY OF INFO--USSR

SOURCE--MOSCOW, DOKLADY AKADEMII NAUK SSSR, VOL 191, NO 3, 1970, PP
689-692

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, EARTH SCIENCES AND OCEANOGRAPHY, BIOLOGICAL AND
MEDICAL SCIENCES

TOPIC TAGS--BATHYPHOTOMETER, MARINE BIOLOGY, LUMINESCENCE, OCEANOGRAPHIC
INSTRUMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1990/0270

STEP NO--UR/0020/70/191/003/0639/0692

CIRC ACCESSION NO--AT0108574

UNCLASSIFIED

2/3 019

UNCLASSIFIED

PROCESSING DATE--020CT70

CIRC ACCESSION NO--AT0108574

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REGISTRY OF BIOLUMINESCENCE IS EVIDENTLY THE ONLY AVAILABLE MEANS FOR STUDYING MANIFESTATIONS OF LIFE OF ABYSSAL ORGANISMS IN SITU. THE PHYSICS INSTITUTE SIBERIAN DEPARTMENT ACADEMY OF SCIENCES USSR HAS DEVELOPED AN ABYSSAL BATHYPHOTOMETER WITH A SELF CONTAINED POWER SOURCE WITH THE REGISTRY OF SIGNALS FROM A PHOTODETECTOR; IT IS CONNECTED TO THE SHIP BY A CABLE. MAGNETIC RECORDING IS USED FOR SIGNAL REGISTRY. AT THE SITE OF THE INSTRUMENT IT WAS DEEMED NECESSARY TO INTRODUCE INTO THE MEDIUM SOME FORM OF EXCITATION BECAUSE MECHANICAL EXCITATION BY THE INSTRUMENT ITSELF IS SCARCELY ADEQUATE AT THE DEPTHS WHERE MEASUREMENTS WERE MADE. THE EXCITATION SOURCE WAS A FLASH LAMP. THE ARTICLE IS ACCOMPANIED BY A BLOCK DIAGRAM OF THE INSTRUMENT. THE BATHYPHOTOMETER OPERATES IN ACCORDANCE WITH A PRESTIPULATED PROGRAM. THE DURATION OF AN INDIVIDUAL FLASH IS 1 MSEC. THE INSTRUMENT CONSISTS OF TWO COUPLED INSTRUMENT PACKAGES, ORIENTED AT AN ANGLE TO ONE ANOTHER IN SUCH A WAY THAT THE OPTICAL AXES OF BOTH PACKAGES INTERSECT AND ARE DIRECTED DOWNWARD. THE LARGER OF THE CONTAINERS HOLDS THE PHOTODETECTOR AND THE POWER SOURCE, THE PROGRAMMED CONTROL SYSTEM AND THE RECORDER. THE SMALLER CONTAINER HOLDS THE FLASH LAMP WITH PROGRAMMED CONTROL AND ITS POWER SOURCE. THE CONTAINERS ARE FABRICATED FROM A TITANIUM ALLOY AND ARE DESIGNED FOR OPERATING AT PRESSURES UP TO 1,500 KG-CM PRIME2, THAT IS, UP TO THE GREATEST OCEAN DEPTHS. THE INSTRUMENT WAS USED ABOARD THE "VITYAZ" IN DECEMBER 1968 FOR MEASURING BIOLUMINESCENCE IN THE JAPANESE DEEP AT DEPTHS OF 7,000-7,200 M.

UNCLASSIFIED

313 019 UNCLASSIFIED PROCESSING DATE--020CT70
CIRC ACCESSION NO--AT0108574
ABSTRACT/EXTRACT--THE BATHYPHOTOMETER EXPOSURE TIME AT THE MEASUREMENT
HORIZON WAS 60 MINUTES; DURING THIS TIME 18 BIOLUMINESCENT BURSTS WERE
REGISTERED. INFORMATION IS GIVEN ON THE AMPLITUDES, DURATIONS AND
ENERGIES OF THESE BURSTS.

UNCLASSIFIED

USER

UDC: 681.326.3

ZHUKOV-YEMEL'YANOV, O. D., FILIMONOV, Ye. A., KOKHANOV, Yu. A., KLIMOV, V. V.

"A Device for Controlling a Modular Primary Memory Unit"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obrabotki, Tovarnyye Znaki,
No 31, 1970, Soviet Patent No 283685, Class 42, filed 18 Aug 69, p 136

Abstract: This Author's Certificate introduces a device for controlling a modular primary memory unit. The device contains a circuit for commutating the lines of the primary memory unit, comparison circuits, control circuits, an analysis circuit, and a demand priority circuit. As a distinguishing feature of the patent, speed is increased by adding a block of tags for unsatisfied demands, a store of controlling words for the primary memory unit, and a selection circuit for the release register of the control word store. The control circuit for the block of tags for unsatisfied demands is connected to the circuit for analyzing demand words from the channels and the central computer. The controlling inputs of this analysis circuit are connected to the circuit for priority of demands from the channels and the central computer. The circuit for controlling selection from the block of tags for unsatisfied demands is connected by its first output to the control inputs of the circuit for priority of demands from the channels and the cen-

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ZHUKOV-YEMEL'YANOV, O. D. et al., Soviet Patent No 283685

tral computer, while its second output is connected by the controlling inputs to the first inputs of the registers of the store of controlling words of the primary memory unit. The first group of inputs of the circuit for control of selection from the block of tags of unsatisfied demands is connected to the outputs of the circuits which shape the signals for the end of the cycle of the modules in the primary memory. The second group of inputs is connected to the first outputs of the registers of the block of tags for unsatisfied demands, and the third group of inputs is connected to the outputs of the first comparison circuit. The circuit for control of the block of tags for unsatisfied demands is connected by the controlling inputs to the first register of the block of tags for unsatisfied demands and to the circuit for priority of demands from the channels and the central computer. The second outputs of the registers of the block of tags for unsatisfied demands are connected to the inputs of the first comparison circuit. Connected to the auxiliary input of the comparison circuit is the first output of the circuit for selecting the register of the store of controlling words for the primary memory. The second output of this circuit is connected to the circuit for control of selection from the primary memory and the distribution of readout data, and its inputs are connected to the first outputs of the registers of the store of controlling words of the primary memory. The second outputs of the store are connected to the inputs of the second com-

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-ZHUKOV-YEMEL'YANOV, O. D. et al., Soviet Patent No 283685

parison circuit, the auxiliary input of this comparison circuit being connected to the circuit for analysis of demand words from the channels and the central computer. This analysis circuit is also connected to the first input of the second comparison circuit and to the first and second inputs of the circuit for control of the store of controlling words of the primary memory unit. The outputs of this control circuit are connected to the second inputs of the registers of the store of controlling words of the primary memory unit, to the circuit for commutating the lines of the primary memory unit, and to the circuit for priority of demands from the channels and the central computer.

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USSR

UDC 669.017

GORYACHKOVSKIY, YU. G., KOSTIKOV, V. I., and FILIMONOV, YE. F., Moscow
Institute of Steel and Alloys, Department of High Temperature Materials

"Experimental Evaluation of the Surface Energy of Graphite"

Ordzhonikidze, IVUZ, Tsvetnaya Metallurgiya, No 5, 1973, pp 81-83

Abstract: The surface energy of polycrystalline graphite was determined from the formula

$$\sigma_T = \frac{F^2 L^2}{3 E b^2 h^3}$$

where σ_T is the free surface energy of the solid, F is the critical cleavage force, L is the length of the initial fracture, E is the modulus of elasticity, b is the width of the sample, and h is the half-width of the sample. Three types of graphite having a porosity of 20-22% were used. The average value of σ_T from 250 samples of each graphite is as follows: ARV, 2050 ergs/cm²; MG, 1725 ergs/cm²; and MPG, 2130 ergs/cm². Annealing the samples at 2300°C lead 1/2

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GORYACHKOVSKIY, YU. G., et al., TVUZ, Tsvetnaya Metallurgiya, No 5, 1973, pp 81-83

to a significant reduction (on the order of 25%) in σ_T . The value of σ_T was essentially independent of organic surface-active compounds.

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USSR

UDC 549.212:532.64

KOSTIKOV, V. I., KOSHELEV, YU. I., and FILIMONOV, YE. F., Moscow Institute of Steel and Alloys

"Features of Molten Titanium and Zirconium Spreading on Pyrographite"

Moscow, Neorganicheskiye Materialy, Vol 9, No 4, Apr 73, pp 592-595

Abstract: The wetting and spreading properties of molten titanium and zirconium on a substrate of pyrolytic graphite were studied for two different batches of pyrolytic graphite. One batch of graphite was produced at 2100°C followed by a 3-hour anneal at 2200°C and one rate of precipitation, while the second batch was produced at the same temperature conditions but with a different precipitation rate. Surface energy was 350 erg/cm² for the first graphite batch, and 720 erg/cm² for the second batch. Temperature relationships of the kinetics of molten titanium spreading were obtained where it was noted that spreading rate decreases with increasing temperature. From these same kinetic curves the loss of free surface energy and interphase energy at the solid-liquid interface were calculated. The good coincidence of surface energy at the solid-liquid interface was shown from data on the kinetics of spreading with values of surface energy at the solid-liquid interface obtained by the method of the rise of molten metal between plane-parallel plates. 3 figures, 2 tables, 6 bibliographic references.

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USSR

UDC 616-036.882-08:615.471:616.127:616-089.583.29 (1)

MESHALKIN, Ye. N., FED'KO, Ye. S., STUNZHA, Ye. A., SADCHIKOV, I. V.,
FILIMONOV, Ye. S., and SERGEYEV, Ye. N., New Siberian Scientific Research
Institute of the Pathology of Circulation, Ministry of Health RSFSR

"Resuscitation of the Organism After Prolonged Clinical Death by Means of an
Artificial Circulation Apparatus in Association With Hemodilution and Hypo-
thermia."

Kiev, Vrachebnoye Delo, No 4, 1973, pp 73-77

Abstract: To refine the method, experiments were conducted on 72 anesthetized
dogs in which uni- or bilateral thoracotomy was performed and clinical death
(disappearance of EEG waves) caused by discontinuation of artificial respira-
tion and induction of cardiac arrest. Eight to 18 min after clinical death,
resuscitation was begun with blood flow maintained by a pump either through
the coronary and carotid arteries or through the whole body at rates of 60-120
ml/kg/min, under normothermia or hypothermia, with utilization of heparinized
donor blood or a plasma expander to achieve hemodilution. The total perfusion
time was 40-60 min. Resuscitation was considered successful if normal EEG,
effective heart activity, spontaneous respiration, renal function, motor
activity, and unconditioned and some conditioned reflexes were restored. The
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USSR

MESHALKIN, Ye. N., et al., Vrachebnoye Delo, No 4, 1973, pp 73-77

optimal conditions -- whole-body perfusion at a rate of 80-100 ml/kg/min, with blood diluted to about 6-8 g% Hb, and a hypothermia of 28-30°C achieved in 5-8 min -- yielded a recovery rate of 80%. This method was subsequently applied on 19 patients during cardiac surgery complicated by cardiac arrest and failure of all other therapeutic measures. Five patients were successfully resuscitated; they recovered and were eventually discharged from the hospital in satisfactory condition. The case history of a 12-year old cardiac surgery patient is given.

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USSR

UDC 612.822.3

FILIMONOVA, T. D., Central Scientific Research Institute of Forensic
Psychiatry imeni V. P. Serbskiy, Moscow

"The Shape of the 'Expectancy' Wave and Man's Mental State"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti, Vol 23, No 3, May/Jun 73,
pp 643-646

Abstract: A study was made of the relationship between individual parameters of the E-wave (contingent negative variation) and a person's mental state. An initial series of tests with light and sound signals revealed wide fluctuations in E-wave parameters in the group of subjects as a whole, and in individual subjects over the course of the experiment. A supplementary study showed that E-wave amplitude increased with more complicated instructions and greater attentiveness on the part of the subject. These factors also affected the angle of the wave's rise and fall. Quick, correct fulfillment of instructions resulted in an abrupt drop in the E-wave; uncertainty resulted in a longer, more slanting decline. The drop in negativity and the subsequent development of positivity were related to the decision-making, not to the motive response. The magnitude of the amplitude, duration, and shape of the E-wave, and the subsequent positivity were found to be relatively independent, apparently reflecting different aspects of the brain's integrative activity.

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USSR

UDC 621.3.032.266.3

LEVIN, M. L., MINTS, A. L. - Academician, NAUMENKO, Ye. D. and FILIMONOVA, T. N.,
Council for Charged Particle Accelerators, Academy of Sciences of the USSR, Moscow

"Gyromagnetic Compression of Powerful, Relativistic, Dense Electron Beams of Tubular Form"

Moscow, Doklady Akademii Nauk SSSR, Vol 211, No 5, 1973, pp 1095 - 1098

Abstract: Electron beams are used to transfer large amounts of energy to small objects in brief intervals of time. This makes it advantageous to compress them to maximum density, but the high charge of the electron in relation to its mass makes this difficult. The method described in this article for compressing segments of a tubular electron beam involves three steps: a) electron tubes are rearranged into rotating electron rings moving along an axis; b) the rings are subjected to radial compression in a spatially increasing, static magnetic field; c) the compressed rings are again reformed into sections of a tubular electron beam moving parallel to the axis, differing from the initial segments by their smaller dimensions and higher density. Step a uses an apparatus described by Levin, Mints, and Naumenko in Volume 204, No 4 of this journal. The same magnetic system can be used for operation c. The apparatus for step b is schematically diagrammed in the article.

As the rings are compressed, the energy of longitudinal motion is converted to rotary motion, which can bring the ring to a complete stop or even reflect it in the
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USSR

LEVIN, M. L., et al., Moscow, Doklady Akademii Nauk SSSR, Vol 211, No 5, 1973, pp 1085 - 1088

opposite longitudinal direction; additional energy must be supplied to overcome this. The electron rings also tend to elongate in the longitudinal direction, requiring further inputs to prevent this. Techniques for achieving these manipulations are described in the article. Typical values to be achieved by this installation include a compression of the ring from a radius of 20 cm to 4 cm, a longitudinal compression from 10 cm to 1 cm, an increase in the relativistic rotation factor from 6 to 30, etc. Calculation of these factors is based on an analysis given by Levin at the Symposium on Collective Acceleration Methods, Dubna, 27 - 30 September, 1972, Document OIYaI,D9-6707,49 (1972).

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1/2 027 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ANTIGENIC ACTIVITY OF DRY SUCROSE ANTIRABIC VACCINE FROM SHEEP
BRAIN -U-
AUTHOR--(04)-NOROSEVA, V.M., GILDINA, S.S., ARKHURINA, M.B., FILIMONOVA,
YE.M.
COUNTRY OF INFO--USSR
SOURCE--VOPROSY VIRUSOLOGII. 1970, NO 2, PP 197-199
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--VIRAL VACCINE, RABIES, ANTIGEN, BRAIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/0732 STEP NO--UR/0402/70/000/002/0197/0199
CIRC ACCESSION NO--AP0108938
UNCLASSIFIED

... THIS PREPARATION WAS ESTABLISHED. A HIGH

UNCLASSIFIED

USSR

UDC 549.212:532.64

KOSTIKOV, V. I., KOSHELEV, YU. I., and FILIMONOV, YE. F., Moscow Institute of Steel and Alloys

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Moscow, Neorganicheskiye Materialy, Vol 9, No 4, Apr 73, pp 592-595

Abstract: The wetting and spreading properties of molten titanium and zirconium on a substrate of pyrolytic graphite were studied for two different batches of pyrolytic graphite. One batch of graphite was produced at 2100°C followed by a 3-hour anneal at 2200°C and one rate of precipitation, while the second batch was produced at the same temperature conditions but with a different precipitation rate. Surface energy was 350 erg/cm² for the first graphite batch, and 720 erg/cm² for the second batch. Temperature relationships of the kinetics of molten titanium spreading were obtained where it was noted that spreading rate decreases with increasing temperature. From these same kinetic curves the loss of free surface energy and interphase energy at the solid-liquid interface were calculated. The good coincidence of surface energy at the solid-liquid interface was shown from data on the kinetics of spreading with values of surface energy at the solid-liquid interface obtained by the method of the rise of molten metal between plane-parallel plates. 3 figures, 2 tables, 6 bibliographic references.

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UDC 616-036.882-08:615.471:616.127:616-089.583-29 (1)

USSR

MESHALKIN, Ye. N., RED'KO, Ye. S., STUNZHA, Ye. A., SADCHIKOV, I. V.,
FILIMONOV, Ye. S., and SERGEYEV, Ye. N., New Siberian Scientific Research
Institute of the Pathology of Circulation, Ministry of Health RSFSR

"Resuscitation of the Organism After Prolonged Clinical Death by Means of an
Artificial Circulation Apparatus in Association With Hemodilution and Hypo-
thermia"

Kiev, Vrachebnoye Delo, No 4, 1973, PP 73-77

Abstract: To refine the method, experiments were conducted on 72 anesthetized dogs in which uni- or bilateral thoracotomy was performed and clinical death (disappearance of EEG waves) caused by discontinuation of artificial respiration and induction of cardiac arrest. Eight to 18 min after clinical death, resuscitation was begun with blood flow maintained by a pump either through the coronary and carotid arteries or through the whole body at rates of 60-120 ml/kg/min, under normothermia or hypothermia, with utilization of heparinized donor blood or a plasma expander to achieve hemodilution. The total perfusion time was 40-60 min. Resuscitation was considered successful if normal EEG, effective heart activity, spontaneous respiration, renal function, motor activity, and unconditioned and some conditioned reflexes were restored. The

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MESHALKIN, Ye. N., et al., Vrachebnoye Delo, No 4, 1973, PP 73-77

optimal conditions -- whole-body perfusion at a rate of 80-100 ml/kg/min, with blood diluted to about 6-8 g% Hb, and a hypothermia of 28-30°C achieved in 5-8 min -- yielded a recovery rate of 80%. This method was subsequently applied on 19 patients during cardiac surgery complicated by cardiac arrest and failure of all other therapeutic measures. Five patients were successfully resuscitated; they recovered and were eventually discharged from the hospital in satisfactory condition. The case history of a 12-year old cardiac surgery patient is given.

UDC 612.822.3

USSR

FILIMONOVA, T. D., Central Scientific Research Institute of Forensic
Psychiatry imeni V. P. Serbskiy, Moscow

"The Shape of the 'Expectancy' Wave and Man's Mental State"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti, Vol 23, No 3, May/Jun 73,
pp 643-646

Abstract: A study was made of the relationship between individual parameters of the E-wave (contingent negative variation) and a person's mental state. An initial series of tests with light and sound signals revealed wide fluctuations in E-wave parameters in the group of subjects as a whole, and in individual subjects over the course of the experiment. A supplementary study showed that E-wave amplitude increased with more complicated instructions and greater attentiveness on the part of the subject. These factors also affected the angle of the wave's rise and fall. Quick, correct fulfillment of instructions resulted in an abrupt drop in the E-wave; uncertainty resulted in a longer, more slanting decline. The drop in negativity and the subsequent development of positivity were related to the decision-making, not to the motive response. The magnitude of the amplitude, duration, and shape of the E-wave, and the subsequent positivity were found to be relatively independent, apparently reflecting different aspects of the brain's integrative activity.

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UDC 621.3.032.266.3

USSR

LEVIN, M. L., MINTs, A. L. - Academician, NAUMENKO, Ye. D. and FILIMONOVA, T. N.,
Council for Charged Particle Accelerators, Academy of Sciences of the USSR, Moscow

"Gyromagnetic Compression of Powerful, Relativistic, Dense Electron Beams of Tubular
Form"

Moscow, Doklady Akademii Nauk SSSR, Vol 211, No 5, 1973, pp 1085 - 1088

Abstract: Electron beams are used to transfer large amounts of energy to small objects in brief intervals of time. This makes it advantageous to compress them to maximum density, but the high charge of the electron in relation to its mass makes this difficult. The method described in this article for compressing segments of a tubular electron beam involves three steps: a) electron tubes are rearranged into rotating electron rings moving along an axis; b) the rings are subjected to radial compression in a spatially increasing, static magnetic field; c) the compressed rings are again reformed into sections of a tubular electron beam moving parallel to the axis, differing from the initial segments by their smaller dimensions and higher density. Step a uses an apparatus described by Levin, Mintis, and Naumenko in Volume 204, No 4 of this journal. The same magnetic system can be used for operation c. The apparatus for step b is schematically diagrammed in the article.

As the rings are compressed, the energy of longitudinal motion is converted to rotary motion, which can bring the ring to a complete stop or even reflect it in the

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USSR

LEVIN, M. L., et al., Moscow, Doklady Akademii Nauk SSSR, Vol 211, No 5, 1973, pp 1085 - 1088

opposite longitudinal direction; additional energy must be supplied to overcome this. The electron rings also tend to elongate in the longitudinal direction, requiring further inputs to prevent this. Techniques for achieving these manipulations are described in the article. Typical values to be achieved by this installation include a compression of the ring from a radius of 20 cm to 4 cm, a longitudinal compression from 10 cm to 1 cm, an increase in the relativistic rotation factor from 6 to 30, etc. Calculation of these factors is based on an analysis given by Levin at the Symposium on Collective Acceleration Methods, Dubna, 27 - 30 September, 1972, Document OIYaI,D9-6707,49 (1972).

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1/2 027
TITLE--ANTIGENIC ACTIVITY OF DRY SUCROSE ANTIRABIC VACCINE FROM SHEEP
BRAIN -U-
AUTHOR--(04)--MOROGOVA, V.M., GILDINA, S.S., AKCHURINA, A.B., FILIMONOVA,
YE.M.
COUNTRY OF INFO--USSR
SOURCE--VOPROSY VIROSOLOGII, 1970, NR 2, PP 197-199
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--VIRAL VACCINE, RABIES, ANTIGEN, BRAIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/0732

STEP NO--UR/0402/70/000/002/0197/0199

IRC ACCESSION NO--AP0108938

UNCLASSIFIED

2/2 027

CIRC ACCESSION NO--AP0108938
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--18SEP70

ABSTRACT. THE DYNAMICS OF VIRUS NEUTRALIZING
ANTIBODY WAS STUDIED IN SERATAKEN FROM 30 SUBJECTS RECEIVING A COMPLETE
COURSE OF VACCINATIONS WITH COMMERICAL DRY ANTIRABIC VACCINE. A HIGH
ANTIGENIC ACTIVITY OF THIS PREPARATION WAS ESTABLISHED.

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Acc. Nr.: AP0100791

Ref. Code: UR 0182

USSR

UDC: 621. 735.32

PIIIMONOV, Yu. F. and GUSINSKIY, V. I.

"Investigating the Cold Hydrostatic Stamping Process"

Moscow, Kuznechno-Shtampovoychnoye Proizvodstvo, No. 2, 1970,
pp 6-8

Abstract: The change in plasticity and the resistance to deformation of cylindrical objects of various alloys in a fluid under high pressure are considered in this experimental article. The experiments were conducted in a container of the fluid under a hydraulic press exerting a pressure up to 12,000 kg s/cm². A drawing of the test container is given. The liquid was a mixture of ethylidene glycol and glycerin in equal amounts, capable of being compressed to 20,000 to 30,000 kg s/cm² without heating. The pressure of the fluid was measured with a type 3V manometer of the first class, and the stress deforming the object was de-

Reel/Frame

Acc. Nr.: AP0100791

terminated by a tensometer and an oscillograph through the difference between the readings for the total tension on the object and the fluid pressure, and the pressure of the fluid without the object. It was established that the frictional losses in the condensation under high pressure remain stable, but under fluid pressures of 8000 to 10,000 kg s/cm², they amount to 5-3% of the force on the plunger generating the pressure. The samples tested were duralumin type D1, brass type LS59-1, bronze type AZh9-4, titanium alloy type VT6, high-speed steel type R18. The authors conclude with the assertion that the study of macro- and micro-structures through cross sections of the deformed specimens confirms that the pressure of the surrounding medium has no effect on the structure of the alloy.

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REEL/FRAME

19850299

Cryogenics & Superconductivity

UDC 621.3

USSR

TAREYEV, B.M., FILIMONOV, YU.P.

"Properties Of Electrotechnical Materials At Cryogenic Temperatures"

Svoystva elektrotekhnicheskikh materialov pri priogennykh temperaturakh (cf. English above), Mosk. In-t radiotekhn., elektron. i avtomatiki (Moscow Institute Of Electrical Engineering, Electronics, And Automatics), Moscow, 66 pp, ill., 17 k. (from Elektrotehnika i energetika, No 10, Oct 1972, Abs. No. 10B1K)

Translation: The book is school equipment for the Moscow Institute Of Electrical Engineering, Electronics, And Automatics (MIREA). In addition to purely scientific interest, study of the properties of various electrotechnical materials at cyrogenic temperatures is important in practice because in a number of instances electrotechnical materials are obliged to operate at extremely low temperatures of the environment (e.g., apparatus on board spaceships); and what is more, in a number of instances electrotechnical materials at cyrogenic temperatures reveal special properties which with progress may be used in fundamentally new devices (e.g., the phenomenon of superconductivity). In the introductory chapter the properties are considered of cybernetic coolants with particular attention paid to liquid helium. The chapter "Superconductors"

USSR

TAREYEV, B. M., FILIMONOV, Yu. P., Svoystva elektrotekhnicheskikh materialov pri priogennykh temperaturakh, Mosk. In-t radiotekhn., elektron. i avtomatiki, Moscow, 66 pp, ill., 17 k.

contains basic information on superconductivity, an examination of the important and SC I, II, and III classes, the principal forms of SC conductors, as well as various uses of superconductors (SC magnets, temperatures, rotating electrical machines, "magnetic lubricant," SC electrical transmission lines, cryotrons). The chapter "Hyperconductors" considers the possible use of extremely small ρ aluminum, beryllium, and others at cryogenic temperatures. In the chapter "Dielectrics At Cryogenic Temperatures" the properties are considered of cryogenic liquids, gases, and various solid dielectrics at cryogenic temperatures, and the special features of fulfillment of electrical insulation operating at such temperatures. In a very short chapter "Magnetic Materials At Cryogenic Temperatures" information is presented on changes of the parameters of certain magnetic materials at extremely low temperatures. In the chapter "Thermal Properties Of Materials At Cryogenic Temperatures" data are presented on thermoconduction, thermal capacity, and changes of geometrical dimensions (thermal shrinkage) of some forms of electrotechnical materials during deep-freezing.

2/2

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UDC: 681.3.001:518.5

USSR

FILIMONOV, Yu.S.

"The Language of Control of the Process of Problem Solving in an Automatic Control System"

Sistemy I Sredstva Avtomat. Upr. [Automatic control systems and equipment] Kiev, 1970, pp 154-158 (translated from Referativnyy Zhurnal Avtomatika, Telemekhanika I Vychislitel'naya Tekhnika, No 3, 1971, Abstract No 3 B107 by O. Sh.)

Translation: The author studies a system having organization of the solution of problems of control and planning without multi programming but with the possibility of combining the operation of input-output devices. It is noted that control of the process of solution is impossible without a programming language fixing unified methods of performance of individual functions when called by various programs or from the control panel. In contrast to problem-solving languages, designed for operations with arrays, the control language is used to form, move, change, and destroy working arrays, controlling levels in catalogs and to move data arrays. An example of such a language is presented. The syntax and semantics are described. 4 biblio. refs.

- 9 -

1/1

USSR

UDC: 669.15'26'24'28'3-194:669'14.018.821

PETROVA, V. S., FROLOV, A. V., BATRAKOV, V. P., ~~FILIMONOVA, L. A.~~, BELOUS, V. Ya., NIKISHOV, A. S., BONDAREV, V. V., PODOL'SKIY, M. L.

"Stainless Steel"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 12, Apr 72, Author's Certificate No 33/273, Division C, filed 2 Sep 68, published 30 Mar 72, p 104

Translation: This Author's Certificate introduces: 1. A stainless steel which contains carbon, chromium, nickel, molybdenum, copper and iron. As a distinguishing feature of the patent, mechanical properties are improved by taking the components in the following proportions in percent: carbon--0.03-0.1; chromium--10.05-11.9; nickel--3.3-4.0; molybdenum--2.3-3.0; copper--1.0-2.0; manganese--less than 0.6; silicon--less than 0.8; the remainder iron; and 2. a modification of this steel distinguished by the fact that the chromium:nickel ratio is 2.8-3.8.

1/1

USSR

UDC 617.7-085.849.19

FILIMONOVA, N. M., Problem Scientific Research Laboratory of Eye Surgery
(Director, Foreign Correspondent Academy of Medical Sciences Professor M. M.
Krasnov) at the Second Moscow Medical Institute named N. I. Pirogova

"Laser Coagulation on the Eye Fundus Using an Inverted Image Biomicroscope
with a Positive Lens"

Moscow, Vestnik Oftal'mologii, N5, 1973, pp 75-77

Abstract: An argon laser having convex lens of +60.D was used, as lasers
have a number of advantages over conventional methods. This laser method can
be considered a variety of indirect ophthalmoscopy. Laser-induced coagula-
tion was performed successfully on eight patients. The principle advantages
are the possibility of coagulation on the periphery of the eye fundus without
using contact lenses and the small dimension of the light spot on the retina.

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- 83 -

USSR

NIFANT'YEV, E. Ye., FILIMONOVA, R. D., KLYACHKO, Yu. A.

"Method of Production of Acid Phosphites of Amylopectin"

Otkrytiya Izobreteniya Promyshlennye Obraztsy Tovarnyye Znaki, No 5, 1972,
Patent No 355180.

Translation: 1. Method of production of acid phosphites of amylopectin, differing in that the amylopectin is interacted with lower dialkyl phosphite upon heating with subsequent separation of the end product by known methods.

2. Method according to Claim 1, differing in that the process is performed at 100-120°C.

3. Method according to Claim 1, differing in that the process is performed in the presence of catalytic quantities of sodium.

4. Method according to Claim 1, differing in that the process is performed in a medium of an organic solvent such as tetrahydrofuran.

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Luminescence

USSR

UDC 541.183

KIROVSKAYA, I. A., and FILIMONOVA, V. M., Tomsk State University imeni
V. V. Kuybyshev

"Adsorption of Carbon Dioxide on Monocrystals of Gallium Arsenide"

Moscow, Zhurnal Fizicheskoy Khimii, Vol XLV, No 11, Nov 71, pp 2809-2812

Abstract: Since heterogenic-catalytic reactions proceed mostly on crystal contacts, their mechanism is best understood by assessing the role of the crystallographic characteristics of the surface planes. The authors studied experimentally the adsorption of CO_2 (as part of the reaction of formic acid dissociation) on variously oriented faces of GaAs monocrystals. Adsorption was studied in the $-50 - +350^\circ\text{C}$ temperature range and the 0.05 - 1.0 mm Hg pressure range. Data obtained indicate that physical and chemical irreversible adsorption occurs for the temperature and pressure ranges mentioned.

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USSR

KARTASHEV, K. B., PISTUNOVICH, V. I., PLATONOV, V. V., RYUTOV, V. D.,
FILIMONOVA, YE. A.

"Detection of Fast Electrons in Plasmoid Injection into a Transverse Magnetic Field"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol. 15,
No. 1, 5 Jan 72, pp 7-9

Abstract: Fast electrons observed in the injection of a plasmoid into a transverse magnetic field are described. The experiments were conducted on the INYeS device described by Golovin, et al., at the IV International Conference on Plasma Physics and Thermonuclear Research at Madison in June 1971. It is noted that when a plasmoid enters a transverse magnetic field, there should occur a redistribution of energy between the ion and electron components, as has been discussed theoretically by many authors using a one-dimensional model of an equilibrium boundary layer between the plasma and the magnetic field. In this model the plasma flow incident on the magnetic field is reflected as a whole from the "magnetic wall" and acceleration of electrons and slowing down of ions occurs in the transition layer formed due to separation of the

1/3

Acc. Nr.: AP0100791

terminated by a tensometer and an oscillograph through the difference between the readings for the total tension on the object and the fluid pressure, and the pressure of the fluid without the object. It was established that the frictional losses in the condensation under high pressure remain stable, but under fluid pressures of 8000 to 10,000 kg a/cm^2 , they amount to 5-3% of the force on the plunger generating the pressure. The samples tested were duralumin type D1, brass type LS59-1, bronze type ALB9-4, titanium alloy type VT6, high-speed steel type R15. The authors conclude with the assertion that the study of macro- and micro-structures through cross sections of the deformed specimens confirms that the pressure of the surrounding medium has no effect on the structure of the alloy.

Cryogenics & Superconductivity

USSR

UDC 621.3

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USSR

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- 156 -

USSR

UDC: 681.3.001:518.5

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- 9 -

USSR

UDC: 669.15'26'24'28'3-194:669'14.018.821

PETROVA, V. S., FROLOV, A. V., BATRAKOV, V. P., ~~ILINIKOVA, L. A.~~, BELOUS, V. Ya., NIKISHOV, A. S., BONDAREV, V. V., PODOL'SKIY, M. L.

"Stainless Steel"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 12, Apr 72, Author's Certificate No 334273, Division C, filed 2 Sep 68, published 30 Mar 72, p 104

Translation: This Author's Certificate introduces: 1. A stainless steel which contains carbon, chromium, nickel, molybdenum, copper and iron. As a distinguishing feature of the patent, mechanical properties are improved by taking the components in the following proportions in percent: carbon--0.03-0.1; chromium--10.05-11.9; nickel--3.3-4.0; molybdenum--2.3-3.0; copper--1.0-2.0; manganese--less than 0.6; silicon--less than 0.8; the remainder iron; and 2. a modification of this steel distinguished by the fact that the chromium:nickel ratio is 2.8-3.8.

1/1

USSR

UDC 617.7-085.849.19

FILIMONOVA, N. M., Problem Scientific Research Laboratory of Eye Surgery
(Director, Foreign Correspondent Academy of Medical Sciences Professor M. M.
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Abstract: An argon laser having convex lens of +60.0D was used, as lasers
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be considered a variety of indirect ophthalmomicroscopy. Laser-induced coagula-
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- 83 -

USSR

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Luminescence

USSR

UDC 541.183

KIROVSKAYA, I. A., and FILIMONOVA, V. M., Tomsk State University ineni
V. V. Kuybyshev

"Adsorption of Carbon Dioxide on Monocrystals of Gallium Arsenide"

Moscow, Zhurnal Fizicheskoy Khimii, Vol XLV, No 11, Nov 71, pp 2809-2812

Abstract: Since heterogenic-catalytic reactions proceed mostly on crystal contacts, their mechanism is best understood by assessing the role of the crystallographic characteristics of the surface planes. The authors studied experimentally the adsorption of CO₂ (as part of the reaction of formic acid dissociation) on variously oriented faces of GaAs monocrystals. Adsorption was studied in the --50 - +350°C temperature range and the 0.05 - 1.0 mm Hg pressure range. Data obtained indicate that physical and chemical irreversible adsorption occurs for the temperature and pressure ranges mentioned.

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USSR

KARTASHEV, K. B., PISTUNOVICH, V. I., PLATONOV, V. V., RYUTOV, V. D.,
FILIMONOVA, YE. A.

"Detection of Fast Electrons in Plasmoid Injection into a Transverse Magnetic Field"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol. 15,
No. 1, 5 Jan 72, pp 7-9

Abstract: Fast electrons observed in the injection of a plasmoid into a transverse magnetic field are described. The experiments were conducted on the INYU device developed by Golovin, et al, at the IV International Conference on Plasma Physics and Thermonuclear Research at Madison in June 1971. It is noted that when a plasmoid enters a transverse magnetic field, there should occur a redistribution of energy between the ion and electron components, as has been discussed theoretically by many authors using a one-dimensional model of an equilibrium boundary layer between the plasma and the magnetic field. In this model the plasma flow incident on the magnetic field is reflected as a whole from the "magnetic wall" and acceleration of electrons and slowing down of ions occurs in the transition layer formed due to separation of the

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USSR

KARTASHLEV, K. B., et al, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol. 15, No. 1, 5 Jan 72, pp 7-9

charges. Upon injection of the plasmoid into the magnetic field there was recorded x-radiation with an energy of the order of the energy of the incident protons. The radiation was recorded by a scintillation detector from the central region of the trap. Oscillograms of the x-radiation are shown for different magnetic field strengths. The intensity of the radiation increased with an increase in the field strength from 1 to 2.5 koe. In the absence of a magnetic field the radiation was never observed. A first narrow radiation peak on the time scale corresponds to the time of input of the plasmoid into the magnetic field. A second, wider peak arises simultaneously with the beginning of radiation of the spectral line of copper CuI, $\lambda = 1.06 \mu$, at the time of entry of the plasmoid into the trap from the plasma gun -- for a plasmoid moving with a velocity of $3 \cdot 10^6$ cm/sec and containing a large number of impurities. Electromagnetic radiation in the range 4.6-4.8 cm was recorded simultaneously with the x-radiation; in the case of radiation, it was never observed in the absence of a transverse magnetic field, and its intensity increased with an increase in the field strength. The intensive radiation in the range of characteristic plasma frequencies and their harmonics indicates

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USSR

KARFASHEV, K. B., et al., Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol. 15, No 1, 5 Jan 72, pp 7-9

the existence of a plasma with a high level of oscillations in the trap. A second pulse of x-radiation indicates the presence of high-energy electrons held in the trap. The study indicates that a considerable number of electrons acquire energy and are captured in the trap upon the entry of a fast plasmoid into a transverse magnetic field. The authors conclude that it remains unclear as to what serves as the target for the slowing down of fast electrons responsible for the appearance of the first x-radiation peak, and that the experimental results cannot be fully explained within the framework of the aforementioned one-dimensional model.

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USSR

UDC 616.981.452-022.39-036.23-078.7(472) 8

CHERCHENKO, I. I., OGANYAN, Ye. F., YUNDIN, Ye. V., NAYDEN, P. Ye., YEMEL'YANOV, P. F., GOLUBEV, P. D., FILIMONOVA, Yu. A., GONCHAROV, A. I., LABUNETS, N. F., BABAYEV, M. R., ANANYAN, Ye. L., and KHANGULYAN, E. K., Scientific Research Antiplague Institute of the Caucasus and Transcaucasus, and Antiplague Stations, Azerbaydzhan SSR and Armenian SSR

"Experience in Serological Detection of Plague in Rodent Nest Substrate and in Predatory Bird Pellets Under Field Conditions in Natural Foci of the Caucasus"

Moscow, Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, No 3, 1973, pp 15-20

Abstract: Use of the antibody neutralization reaction (ANR) employing plague antigenic erythrocyte diagnosticum was studied as a serological alternative to detection of plague by bacteriological analysis, for which it is not always possible to gather test material in the field. The study was based on the experimental finding that plague F1 antigen persists in the environment long after an epizootic has subsided. In the first phase, three areas in the Caucasus in which epizootics had been registered previously were studied in 1969-1971. Samples of rodent nest substrate were found to contain F1 antigen by the ANR, whereas bacteriological methods were generally unsuccessful,
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USSR

CHERCHENKO, I. I., et al., Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, No 3, 1973, pp 15-20

indicating the usefulness of this method for retrospective analysis. In the second phase an area in which epizootics had not been recorded previously was studied in 1970-1971. While the ANR revealed the presence of F1 antigen in rodent nest substrate, bacteriological analysis did not produce such evidence until 4 months later. This result indicated that the method is also preferential for early detection of plague epizootics. In the final phase pellets regurgitated by predatory birds feeding on plague-carrying rodents were subjected to the ANR. Once again F1 antigen was detected in areas without previous epizootic history up to 2 months prior to detection by bacterial analysis. As a control pellets from an area known to be free of plague for 40 years was subjected to the ANR, and the results were negative. Thus the ANR is shown to be a suitable and preferential method for retrospective and early field detection of natural plague foci.

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- 10 -

USSR

UDC 519.2:621.391

FILIN, G. D.

"Use of the Theory of Correlated Random Points to Represent
Certain Random Processes of a Special Kind"

Leningrad, Metody predstavleniya i apparaturn. analiz sluchayn.
protseessov i poley. 3-y Vses. simpozium, Sekts. 2 -- Sbornik
(Methods of Display and Machine Analysis of Random Processes and
Fields, Third All-Union Symposium, Section 2 -- Collection of
Works), 1970, pp 69-74 (from Referativnyy Zhurnal -- Matematika,
No 6, June 71, Abstract No 6V225, by Ya. Kogan)

Translation. It is noted that a suitable apparatus for constructing character-
istic groups of even, statistically uniform pulse signals shaping the input
signal process have not been actually developed in radio astronomy and acous-
tics. Characteristics of this group of pulses associated with the properties
of the medium in which they are formed depend strongly on the number of pulses
in a group. In this work it is shown that by knowing decay-multiple correla-
tions between moments of pulse arrival in the group, the mean number of pulses
in the group can be calculated, the variance of input process parameters can
be determined, and, therefore, an effective operator for its analysis can be
found.

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- 33 -

USSR

UDC: 629.7.036.3:533.697.4.001.4

SHCHUKIN, V. K., POLIKARPOV, P. A., FILIN, V. A., KHALATOV, A. A., YAKSHIN, A. P.

"Influence of Entry Conditions on Heat Exchange in Nozzles"

Tr. Kaz. Aviats. In-ta [Works of Kazakh Aviation Institute], 1972, No 151, pp 3-10 (Translated from Referativnyy Zhurnal Aviatsionnyye i Raketnyye Dvigateli, No 5, 1973, Abstract No 5.34.59).

Translation: A description is presented of an experimental installation for the study of unstable convective heat exchange in nozzles. Results are presented from an experimental study of the local heat transfer in a nozzle when a heat insulated pipe with a diameter equal to the input diameter of the nozzle and a relative length $l/d = 1, 2, 5, 10$ or 15 is connected to its input, or when a cylindrical sleeve is placed at the output of the nozzle with various central aperture diameters. 3 figures, 10 biblio. refs.

1/1

- 33 -

USSR

UDC 612.846

FILIN, V. A., and SIDOROV, S. P., All-Union Scientific Research Institute of Medical Instrument Building and Medical Physical Culture Dispensary, Moscow Municipal Health Department

"Involuntary Movements of the Eyes During Mental Work"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol 22, No 4, Jul/Aug 72, pp 688-691.

Abstract: By means of telephotoelectronic recording in a dark room, involuntary movements of the eyes were studied in adult subjects with normal visual acuity. About 8 jumps of the eyes occurred while the subjects were looking straight ahead or had their eyes fixed on a dimly illuminated point and, in most subjects, their number decreased to three or two when they began counting by 7 starting with 100. Thus, with the eyes fixed, the average interval between jumps was 1.3 sec, and it increased to 3.8 sec during counting. With eyes looking straight ahead, the initial average interval of 1.5 sec increased to 2.9 sec during counting. Similarly, the amplitude of the jumps and eye drift diminished during performance of mental work. When the fixation point was shifted by 1° during counting, most subjects did not adjust their gaze and some did not even notice the shift. Individuals in whom the eye movements did not diminish made mistakes in counting. It is concluded that the reduction in eye movements during performance of mental work is indicative of a person's ability to concentrate without dividing attention over two or more subjects.

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1/2 025 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--THE METHODS OF ELONGATION OF TRANSPLANTS IN CONSTRUCTION OF AN
ARTIFICIAL ESOPHAGUS --U-
AUTHOR--(02)--FILIN, V.I., KRASILNIKOV, A.V. F
COUNTRY OF INFO--USSR
SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 5, PP
24-29
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TISSUE TRANSPLANT, GASTROINTESTINAL SYSTEM, SMALL INTESTINE,
COLON, VEIN, THROMBOSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/1014 STEP NO--UR/0589/70/104/005/0024/0029
CIRC ACCESSION NO--AP0109166
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--090CT70

CIRC ACCESSION NO--AP0109166

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VARIOUS PORTIONS OF THE GASTROINTESTINAL TRACT WITH RESPECT TO ELONGATION OF TRANSPLANTS PROCURED FROM THEM HAVE SPECIAL RESERVES STIPULATED BY PECULIARITIES OF THE FORM, WALL STRUCTURE AND VASCULAR SYSTEM OF THE ORGAN. A GASTRIC GRAFT COULD BE ELONGATED BY MEANS OF: A) INCISION OR DISSECTION OF THE WALL ALONG THE LESSES CURVATURE ASPECTS; B) FORMATION OF A GRAFT ALONG THE GREATER CURVATURE ASPECT; C) REMOVAL OF THE SEROMUSCULAR LAYER IN THE DISTAL PORTION. THE GRAFT FROM THE SMALL INTESTINE IS ELONGATED BY A) TRANSVERSE OR LONGITUDINAL INCISION OF THE MESENTERY, AND B) REMOVAL OF THE SEROMUSCULAR LAYER. THE COLON COULD BE MADE LONGER BY A) INCISION OR TOTAL DISSECTION OF FREE BANDS, AND B) REMOVAL OF THE SEROMUSCULAR LAYER. ELONGATION IS ACCOMPLISHED TWO WEEKS OR LONGER FOLLOWING THE FORMATION OF A GRAFT WHEN ITS VASCULAR SYSTEM WILL BE CONSIDERABLY DEVELOPED. MEASURES OF COMBATING AGAINST THROMBOSIS AND IMPROVEMENT OF MICROCIRCULATION CONTRIBUTE TO GREATER EXTENT OF ELONGATION. FACILITY: LNINGRAD. N-I INSTITUTA SKUROY POMOSHCHI IM. I. I. DZHANELIDZE AND KAFEDRY NORMAL'NOR ANATOMII VOYENNO-MEDITSINSKOY ORDENA LENINA KRASNOOZNAMENNOY AKADEMII IM. S. M. KIROVA.

UNCLASSIFIED

Acc. Nr: **AP0047351** **F**

Ref. Code: **U98589**

PRIMARY SOURCE: Vestnik Khirurgii imeni I. I. Grekova, 1970,
Vol 104, Nr / , pp **61-65**

ACUTE GASTRODUODENAL ULCERS AND THEIR COMPLICATIONS

By V. P. Melnikova, V. A. Filin, M. G. Kamenchik and M. A. Samoylova

The work is based on the study of case reports of two recovered and 66 died patients in whom acute erosion and ulcer of the stomach and duodenum were revealed. In 33 patients there were multiple erosions and ulcers, in the remainder — single. Of 44 patients with complicated acute ulcers in 28 patients these were the principal cause of death, while in 14 patients they accelerated the inevitable lethal issue. Two patients have recovered one after gastrectomy and the other — after suturing mucosa around the bleeding ulcer and ligation of the left gastric artery.

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REEL/FRAME

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tdh

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1/2 027
TITLE--REPEATED OPERATIONS IN RESTORATION OF THE ESOPHAGUS -U-
AUTHOR--FILIN, V.I.
COUNTRY OF INFO--USSR
SOURCE--KHIRURGIYA, 1970, NR 3, PP 30-35
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SURGERY, DIGESTIVE SYSTEM DISEASE, NECROSIS, TISSUE
TRANSPLANT, SUTURE, ANASTOMOSIS, DUODENUM, LARGE INTESTINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1983/1177
CIRC ACCESSION NO--AP0054076
UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0054076

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE ANALYZES 193 REPEATED OPERATIONS PERFORMED AFTER PLASTIC REPAIR OF THE ESOPHAGUS. THE AUTHOR DESCRIBES THE CAUSES AND CHARACTER OF REPEATED OPERATIONS, AS WELL AS RECOMMENDATIONS FOR THEIR PREVENTION. THE FOLLOWING WERE THE MAIN CAUSES OF REPEATED OPERATIONS: NECROSIS OF THE TRANSPLANT (22), SHORT TRANSPLANT (28), FAILURE OF THE SUTURES AND FISTULAS OF ESOPHAGOINTESTINAL OR GASTRIC ANASTOMOSES (40), INTESTINAL OBSTRUCTION (18), DIAPHRAGMATIC HERNIA (1), OBSTRUCTION OF THE ARTIFICIAL ESOPHAGUS (42), PYLOROSPASM OR PYLOROSTENOSIS (35), DUODENOSTASIS (2), PEPTIC ESOPHAGITIS (3), PEPTIC ULCERS OF THE GRAFT OF THE LARGE INTESTINE (4) AND DUMPING SYNDROME (2).

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--COLOR PHOTO DEVELOPMENT FOR DIAPOSITIVES -U-
AUTHOR-(03)-FILIN, V.N., ANDRIANOV, K.I., BELYAROVA, T.N.
COUNTRY OF INFO--USSR
SOURCE--POLIGRAFIYA 1970, 1 26-9
DATE PUBLISHED-----70

SUBJECT AREAS--METHODS AND EQUIPMENT
TOPIC TAGS--PHOTOGRAPHIC MATERIAL, COLOR PHOTOGRAPHY, PHOTOGRAPHIC
EMULSION/(U)FT41 PHOTOGRAPHIC MATERIAL

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/0724 STEP NO--UR/0543/70/001/000/0026/0029
CIRC ACCESSION NO--AP0134459
UNCLASSIFIED

2/2 023 UNCLASSIFIED PROCESSING DATE--27NOV70
 CIRC ACCESSION NO--AP0134459
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE PREPN. OF DIAPOSITIVES DIRECTLY FROM PHOTOGRAPHIC MATERIAL FT 41 A PHENIDONE HYDROQUINONE DEVELOPER (1ST DEVELOPER) AND A DEVELOPER CONTG. T-32 (N,ETHYL,N,(2,HYDROXYETHYL),P,PHENYLENEDIAMINE SULFATE), ALPHA,NAPHTHOL, AND PHENIDONE (2ND DEVELOPER) WERE USED. THE OPTIMAL CONCNS. OF KNCS, HYDROQUINONE, PHENIDONE, AND T-32 WERE DETD. PROCESSING SCHEME: (1) 1ST DEVELOPMENT 5-7 MIN AT 20DEGREES (DEVELOPER COMPN.: PHENIDONE 0.4, HYDROQUINONE 10, ANHYD. NA SUB2 SO SUB3 70, NA SUB2 SO SUB3 60, KBR 7, KNCS 2.5 G, H SUB2 0 TO 1000 ML); (2) WASHING 10 MIN AT 14-16DEGREES, (3) BLEACHING 1-2 MIN AT 20DEGREES (K SUB2 CR SUB2 0 SUB7 10 G, H SUB2 SO SUB4 10 ML, H SUB2 0 TO 1000 ML); (4) CLARIFYING 1 MIN AT 20DEGREES IN 10PERCENT SOLN. OF NA SUB2 SO SUB3; (5) WASHING 3-5 MIN AT 20DEGREES; (6) 2ND EXPOSURE FOR 1 MIN WITH A 500-W LAMP AT 1 M; (7) 2ND DEVELOPMENT 5-7 MIN AT 20DEGREES (SOLN. A: HYDROXYLAMINE 1.5, T-32 9, ANHYD. NA SUB2 SO SUB3 2, KBR 3 G, H SUB2 0 TO 500 ML; SOLN. B: K SUB2 CO SUB3 75, PHENIDONE 0.2, ALPHA,NAPHTHOL 2 G, H SUB2 0 TO 500 ML; 1:1 MIXT. OF A PLUS B), (8) FIXING 2-3 MIN AT 18-20DEGREES; (9) WASHING 2-3 MIN AT 18-20DEGREES.

UNCLASSIFIED

USSR

UDC: 533.95

FINAT'YEV, Yu. P., SHCHERBAKOV, L. A., FILIN, V. T.

"Investigation of the Gasdynamic Structure and Electron Distribution in a High-Temperature Supersonic Jet With Solid Phase"

V sb. Teplo- i massoperenos (Heat- and Mass-Transfer--collection of works), T. 1, Minsk, 1972, pp 227-231 (from RZh-Mekhanika, No 7, Jul 72, Abstract No 7B118)

Translation: The article presents the results of investigations of the position of the central shock wave (Mach disc) in the first "barrel" of a jet which is produced when condensed systems with an admixture of aluminum powders are ignited in the prechamber of a vacuum installation. Data are also given on the concentration of electrons in the zones of the nozzle tip and the Mach disc. The experiments included motion picture photography of the inherent luminescence of the jet as well as determining the schlieren pattern of the jet; electron concentration was determined by radioscopy of the jet. The results of experiments on determining $\bar{x} = x_c/d_n$ (x_c is the distance from the nozzle tip to the Mach disc, d_n is the nozzle diameter at the tip) lead to the expression $\bar{x} \approx (2-3) M_n^2 n^{0.4} / (M_n^2 + 1) \cdot (\pi - P_n/P_\infty)$

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USSR

FINAT'YEV, Yu. P. et al., Teplo- i massopereenos, T. 1, Minsk, 1972, pp 227-231

is the degree of deviation of the conditions of escape from the nozzle from the calculated conditions). The experimental results did not reveal any influence of the solid phase on α or on k -- the adiabatic exponent-- nor on the electron concentration.

The calculations and experiments showed that frozen-flow conditions are realized beginning with $M=1.5-2$. Bibliography of ten titles. V. L. Azarov.

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Foundry

USSR

FILIN, Yu. A., ISAYEV, A. S.

"Casting Production of New Shipbuilding Alloys"

Liteynoye Proizvodstvo Novykh Sudostroyitel'nykh Splavov [English version above], Sudostroyeniye Press, Leningrad, 1971.

FOREWORD: The introduction of new technological processes of casting always requires the training of workers who must master the technology of complex-shape casting of refractory alloys, melted in highly complex vacuum-arc melting units, and must prepare molds of highly refractory materials and graphite.

Before the publication of the first edition of this book, workers were trained by individual preparation in operating shops and sections. This method of training of specialists was insufficiently systematic. With the publication of the first edition of this book, the problem of training workers and foreman according to approved plant programs was largely solved.

In the past two years, intensive development and improvement of the technology of manufacture of complex-shaped castings of alloys based on the refractory metals have introduced many new things to the processes and concepts existing earlier. In contrast to the first edition, the second edition

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USSR

FILIN, Yu. A., ISAYEV, A. S., Liteynoye Proizvodstvo Novykh Sudostroyitel'nykh Splavov, Sudostroyeniye Press, Leningrad, 1971.

of this book includes the new chapters "Design of Technological Castings" and "Electrical Equipment and Automatic Equipment for Power Supply and Servicing of Melting-Casting and Heating Furnaces," as well as additional information on mold materials, tap systems, melting technology and the properties of refractory metals and alloys based on them.

Chapters I, II, III and VII were written by Yu. A. Filin, Chapters IV, V and VI -- by A. S. Isayev.

The authors express their gratitude to Doctor of Technical Sciences Professor G. I. Kapyrin, Doctor of Technical Sciences I. V. Gorynin, Candidate of Technical Sciences P. I. Gayday, Candidate of Technical Sciences L. V. Butalov, and also Engineers A. V. Tikhomirov and A. L. Khaykin, Technicians Z. I. Kuptsova and L. M. Yakovleva for their cooperation and help in preparation of the manuscript.

Comments and corrections concerning the book should be sent to: 191065, Leningrad, D-65, Gogalya 8, "Sudostroyeniye" Press.

2/6

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USSR

FILIN, Yu. A., ISAYEV, A. S., Liteynoye Proizvodstvo Novykh Sudostroyitel'nykh Splavov, Sudostroyeniye Press, Leningrad, 1971.

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FILIN, Yu. A., ISAYEV, A. S., Liteynoye Proizvodstvo Novykh Sudostroyitel'nykh Splavov, Sudostroyeniye Press, Leningrad, 1971.

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USSR

FILIN, Yu. A., ISAYEV, A. S., Liteynoye Proizvodstvo Novykh Sudostroyitel'nykh Splavov, Sudostroyeniye Press, Leningrad, 1971.

Chapter V. Electrical Equipment and Automatic Equipment for Power

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USSR

FILIN, Yu. A., and ISAYEV, A. S., Liteynoye Proizvodstvo Novykh Sudostroyitel'nykh Splavov, Sudostroyeniye Press, Leningrad, 1971

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USSR

UDC 621.373.432.1

FILIN, Yu. G.

"A Squegging Oscillator"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 4, Feb 72, Author's Certificate No 326715, Division H, filed 2 Jun 70, published 19 Jan 72, p 211

Translation: This Author's Certificate introduces a squegging oscillator based on Author's Certificate No 210219. As a distinguishing feature of the patent, the squegging oscillator is simplified while retaining its principal characteristics by using one winding of a transformer and the base-emitter junction of a transistor to form the diagonal of the bridge which is an element of the oscillator. The collector of the transistor is connected to the base of another transistor, and also through a resistor to the common line.

1/1

1/2 029 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THERMAL HARDENING OF COMPOSITIONS CONTAINING
POLY(METHYLPHONYLSILOXANE) AND FINELY DISPERSED LAMINATED SILICATES -U-
AUTHOR--(05)-DENISOVA, N.A., KROTIKOV, V.A., KHARITONOV, N.P., FILINA,
~~L.V.~~ NEFEDOV, V.D.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 362-7
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--HARDNESS, SILOXANE, LAMINATED PLASTIC, TALC, ASBESTOS,
ALCOHOL, POLYMER CROSSLINKING, THERMAL EFFECT, BUTANOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0623

STEP NO--UR/0363/70/005/002/0362/0367

CIRC ACCESSION NO--AP0119535

UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119535

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ORG. SILICATE COMPNS. CONTG. POLY(METHYLPHENYLSILOXANE) (I) WERE HARDENED IN THE PRESENCE OF FINELY DIVIDED MUSCOVITE, TALC, ASBESTOS, AND MONTMORILLONITE (WHICH HAD BEEN TREATED WITH BOILING BUOH, OCTANOL, OR DECANOL AT 180-300DEGREES). DTA INDICATED THAT THE HYDROXYLATED SURFACE OF THE LAMINATED SILICATES REACTED WITH ALCS. ONLY AT LARGER THAN OR EQUAL TO 200-300DEGREES. THUS, THE SIOH GROUPS PARTICIPATED IN CONDENSATIONS OCCURRING DURING THE HARDENING OF I. THERMAL HARDENING OF I WITHOUT LAMINATED SILICATES PROCEEDED WELL ONLY AT LARGER THAN OR EQUALS TO 200-300DEGREES. THE THERMAL HARDENING OF I WAS ACCOMPANIED BY EVOLUTION OF GASEOUS PHME, C SUB6 H SUB6, AND CO SUB2. A CROSSLINKING MECHANISM FOR THE HARDENING OF I WAS PROPOSED. FACILITY: INST. KHIM. SILIKAT. IM. GREBENSHCHIKOVA, LENINGRAD, USSR.

UNCLASSIFIED

FILINA V. I.

Acc. Nr: AP0044016

Ref. Code: UR 02407

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 2, pp 24-30

HYGIENIC WORK CONDITIONS AND HEALTH STATUS
OF WORKERS ENGAGED IN PRODUCTION
OF TOLUENEDIAMINE

V. S. Filatova, A. Ya. Tubing, Z. V. Sharonova, I. A. Golova,
V. I. Filina, Dorofeyeva, Ye. D.

While obtaining toluenediamine by using Baier's method the air of work shops can be polluted with toluenediamine, methanol, n-dichlorobenzene and dinitrotoluene. The two lastly named substances could not be traced in most of the samples. The most commonly encountered TDA and methanol concentrations were below the maximally permissible levels. Materials derived from these investigations bring evidence that continuous method of TDA production with remote and automatic control of technological operations and the equipment employed for this purpose deserve high appraisal. The study of the workers' health status revealed mildly pronounced pathological shifts on the level of nervous system, blood and liver.

111

REEL/FRAME
19770453

Edh 6

USSR

BABII, V. V., BLIZNYUK, N. K., DENISENKOVA, R. N., KOLOMIYETS, A. F.,
STREL'TSOV, R. V., ~~FILIN-KOLDAKOV, B. V.~~

"Method of Fighting Undesirable Vegetation"

USSR Author's Certificate No 303038, filed 20/04/67, published 5/07/71.
(Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract
No 4N703P by T. A. Belyaeva).

Translation: In order to increase the herbicidal properties of α -(2, 4, 5-trichlorophenoxy)-propionic acid, it is suggested that it be used as its benzylester, which is more active than the other esters of this acid and has very low volatility.

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USSR

UDC 612.66-053.6(621.941:358.386.1

KOSILOV, S. A., LEONOVA, L. A., and FILINA, N. S., Institute of Physiology of Children and Adolescents, Academy of Pedagogical Sciences USSR, Moscow

"Experience in Using the Results of Physiological Examinations to Predict the Occupational Fitness of Adolescents as Metal Turners"

Moscow, Gigiyena i Sanitariya, No 4, 1973, pp 27-29

Abstract: The authors found 28 key physiological functions to be involved in the various operations performed by metal turners, e.g., muscular strength, precision of kinesthesia, speed of reaction to white and red light, etc., and tested them in 100 15- and 16-year-old youngsters attending a vocational school before they acquired any specific skills and abilities. The results of the tests were compared with evaluations of the skills of the same persons made at the end of the training period by master workers. The test results coincided with the evaluations in about 90% of the cases. The authors caution that the physiological tests are not completely predictive of ultimate success, which also involves such factors as interest in the work, sense of discipline, social considerations, personality, etc.

1/1

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--CHANGES IN A SYSTEM OF ENDOGENOUS GROWTH REGULATORS IN BEAN PLANTS
UNDER THE INFLUENCE OF 2,4-D -U-
AUTHOR--(05)-CHIGRIN, V.V., FILINKOLOAKOV, B.V., FADEYEVA, O.I.,
BORTNIKOVA, T.P., SYKALO, N.I.
COUNTRY OF INFO--USSR
SOURCE--KHIM. SEL. KHOZ. 1970, 8(4), 301-2
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LEGUME CROP, PLANT PHYSIOLOGY, PLANT GROWTH REGULATOR,
HERBICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/0021

STEP NO--UR/0394/70/008/004/0301/0302

CIRC ACCESSION NO--AP0137220

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0137220

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TWENTY FOUR HR AFTER TREATMENT OF KIDNEY BEAN PLANTS WITH A SOLN. OF THE K SALT OF 2,4-D (2 TIMES 10 PRIME NEGATIVE 3 M), THE CONTENT OF INDOLEACETIC ACID (I) IN THE LEAVES WAS UNCHANGED, BUT AFTER 6 DAYS IT WAS DOUBLED. IN THE STEMS OF THE PLANTS THE AMT. OF I DOUBLED, 24 HR AFTER APPLICATION OF THE HERBICIDES. THE ACTIVITY OF I OXIDASE, AND THE CAPACITY OF FIBER HOMOGENATES TO SYNTHESIZE I FROM TRYPTOPHAN, WAS CONSIDERABLY HIGHER FOR PLANTS TREATED WITH 2,4-D. FACILITY: SEVEROKAVKAZ. NAUCH.-ISSLED. INST. FITOPATOL., USSR.

UNCLASSIFIED

Acc. Nr: AP0037240

F Ref. Code: UR 0301

PRIMARY SOURCE: Voprosy Meditsinskoy Khimii, 1970, Vol 16,
Nr 1, pp 59-62

CONTENT AND PRESENCE OF COMPLEX OF FIBRINOGEN- J^{131} IN BLOOD
STREAM AFTER INTRAVENOUS THROMBIN ADMINISTRATION

A. F. Filinkov

The Laboratory of Physiology and Blood Biochemistry Coagulation, State University,
Moscow

After i. v. thrombin administration at a moderate doses into animals on the background of previous fibrinogen J^{131} injection 85% of the latter remains in the circulating blood. After i. v. injection of heparine a 100% of labelled fibrinogen is remained in blood. The increase in fibrinolytic activity of blood after i. v. administration of thrombin as well as heparine was noted. The soluble complexes of fibrinogen- J^{131} with heparine was obtained in relatively pure system. The presence of fibrinogen- J^{131} -heparine complex in rat blood plasma was established after i. v. fibrinogen- J^{131} administration and successive thrombin or heparine injection. After i. v. thrombin as well as heparine

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REEL/FRAME
19730166

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administration 7—10 min later nearly all fibrinogen- J^{131} was detected in complex with heparine. To 60—70 min of the experiment the dissociation of the complex in the body was observed. This was followed by fibrinogen- J^{131} liberation able to coagulation in the presence of thrombin. The formation of fibrinogen — heparine complex in blood stream of the animal testifies to the throw of heparin into blood stream and may represent one of the possible reasons of transient (60—70 min) disorder in blood coagulation. Complex fibrinogen — heparine possessed the appreciable antithrombin activity.

D. A.

19730167

1/2

1/2 051 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--MONTE CARLO STUDY OF AN EQUILIBRIUM NONIDEAL PLASMA -U-
AUTHOR--(03)-VOROBYEV, V.S., NORMAN, G.E., FILINOV, V.S.
COUNTRY OF INFO--USSR
SOURCE--PRIKL. SPEKTROSK. 1970, 12(3), 399-402 (RUSS)
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--MONTE CARLO METHOD, COULOMB INTERACTION, PARTICLE MOTION,
QUANTUM MECHANICS, MARKOV PROCESS, HYDROGEN PLASMA, DENSE PLASMA,
CORRELATION FUNCTION, THERMODYNAMIC PROPERTY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/1488 STEP NO--UR/0368/70/012/003/0399/0402
CIRC ACCESSION NO--AP0118475
UNCLASSIFIED

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051

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0118475

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MONTE CARLO (MC) STUDY WAS MADE OF A NONDEGENERATE PLASMA. THE QUANTUM EFFECTS OF INTERACTION WERE TAKEN INTO ACCOUNT BY REPLACEMENT OF THE COULOMB POTENTIAL BY A PSEUDOPOTENTIAL AT SMALL DISTANCES. THE PSEUDOPOTENTIAL WAS DETD. FROM QUANTUM MECH. CONSIDERATION OF THE MOTION OF 2 CHARGED PARTICLES. THE LIMITS OF THAT MODEL ARE DISCUSSED. THE COMPARATIVELY SHORT MARKOV CHAINS (10 PRIME4) WERE USED. THE NO. OF PARTICLES IN THE MC CELL WAS ONLY 30-40. THE THERMODYNAMIC PROPERTIES AND CORRELATION FUNCTION WERE CALCD. FOR VERIFICATION OF THE METHOD USED, THE CALCN. FOR A NEARLY IDEAL PLASMA OF H ATOMS WAS MADE, AND THE RESULTS WERE GOOD. FOR A DENSE H PLASMA AT 30,000DEGREESK, THE IONIZATION DEGREE WAS 0.4 AT GAMMA EQUALS 1 AND IS SMALLER THAN 0.2 AT GAMMA EQUALS 2, WHERE GAMMA IS THE INTERACTION PARAMETER OF FREE CHARGES.

UNCLASSIFIED

USSR

NAUMOV, B. N., ZAKHAROV, V. G., FILINOV, Ye. N.

"Basic Principles of Creation of Combined Complexes of Computer Equipment for Control Systems"

Upravlyayushchiye Sistemy i Mashiny [Control Systems and Machines], 1972, No 1, pp 104-109 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V593).

Translation: The basic principles are presented for the creation of combined computer equipment complexes for the construction of ACS at various levels; the composition of systems developed and planned for development is indicated, and problems of their utilization in systems of varying complexity are described.

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AN0016804

AUTHOR-- FILINSKIY, V.
TITLE-- A VALUABLE ALLOY

NEWSPAPER-- KAZAKHSTANSKAYA PRAVDA, JANUARY 31, 1970, P. 4, COLS 1-5

ABSTRACT-- A. KUNAYEV, HEAD, LABORATORY OF ALLOYING METALS AT THE INSTITUTE OF METALLURGY AND BENEFICIATION OF THE KAZAKH ACADEMY OF SCIENCES, DIRECTED COMPREHENSIVE STUDIES WHICH HAVE MADE POSSIBLE THE PRODUCTION OF VANADIUM AS A BY-PRODUCT IN THE PRODUCTION OF PHOSPHOROUS FROM PHOSPHORITES AND VANADIUM ORE FOUND IN ABUNDANCE IN THE KARATAU REGION. THE ELECTROTHERMIC METHOD PROPOSED BY KUNAYEV WILL SATISFY THE DEMAND FOR VANADIUM NOT ONLY FOR THE TOOL STEELS BUT ALSO FOR CONSUMER GOODS.

THE "LENGIPROKHIM" HAS STARTED DRAWING TECHNICAL AND ECONOMIC PLANS SO AS TO IMPLEMENT THE PROPOSAL.

PHOTOGRAPHS OF KUNAYEV AND V. VOLYNIK, SENIOR SCIENCE ASSOCIATE, CANDIDATE OF TECHNICAL SCIENCES, ARE GIVEN.

19592149

1/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CONFIGURATIONS AND CONFORMATIONS OF SUBSTITUTED OXETANES -U-
AUTHOR--(03)-SAMITOV, YU.YU., BOGATSKIY, A.V., FILIP, G.A.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 192(1), 138-41
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--STEREOCHEMISTRY, ISOMER, PROTON MAGNETIC RESONANCE, BUTANE,
PROPANE, ORGANIC OXIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/1877 STEP NO--UR/0020/70/192/001/0138/0141
CIRC ACCESSION NO--AT0132139
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0132139

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PMR SPECTRA WERE SHOWN FOR 2,METHYLOXETANE (I), 2,3,DIMETHYLOXETANE (II), AND 2,METHYL,3,ISOBUTLOXETANE (III) STEREOISOMERS. IT WAS CONCLUDED THAT I EXISTS WITH SOME STABILIZATION OF THE NONPLANAR FORM OWING TO EXISTENCE OF ECLIPSED INTERACTIONS IN THE PLANAR FORM; SINCE THERE IS ALSO A COMPETITION BETWEEN THE SADDLE FORMS WITH VARYING DEGREE OF ANGLE DISTORTION, IT WAS CONCLUDED THAT I HAS PROBABLY THE INTERMEDIATE SADDLE CONFORMATION WITH ABOUT A 150DEGREE ANGLE. IN II THE STABLEST FORM IS THE TRANS ISOMER WITH A SADDLE ANGLE OF 150DEGREES. THE LOWER BOILING ISOMER OF II EXISTS LONGER IN THE DIPSEUDOEQUATORIAL FORM OF DEEPER SADDLE CONFORMATION AND MUST BE THE TRANS ISOMER. THE PSEUDOEQUATORIAL H ATOM IS SHIELDED MORE THAN IS THE PSEUDOXIAL PROTON IN THE CASE OF THE LOWER BOILING ISOMERS OF II AND III; THE SPECTRA OF THE HIGH BOILING ISOMERS OF II AND III INDICATE EQUIVALENCE OF PROTONS H SUBA AND H SUBB, POSSIBLE ONLY FOR THE CIS ISOMERS. FACILITY: INST. ORG. FIZ. KHIM., KAZAN, USSR.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--CALCULATION OF KINETIC COEFFICIENTS DURING THE SCATTERING OF
CURRENT CARRIERS OF IONIZED IMPURITIES -U-
AUTHOR-(03)-BOLSHAKOV, L.P., NASLEDOV, D.N., FILIPCHENKO, A.S.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(3), 789-92
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--CARRIER SCATTERING, HALL MOBILITY, THERMAL EMF, FERMI LEVEL,
SEMICONDUCTOR IMPURITY, KINETIC THEORY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/1969 STEP NO--UR/0181/70/012/003/0789/0792
CIRC ACCESSION NO--AP0105043
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105043

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPENDENCES WERE COMPARED OF DIFFERENTIAL THERMAL EVF., HALL MOBILITY, AND THE TRANSVERSE NERNST ETTINGSHAUSEN COEFF. ON THE POSITION OF THE FERMI LEVEL, CALCD. WITH EXACT CONSIDERATION OF THE DEPENDENCE OF THE SCREENING PARAMETER ON THE ENERGY AND IN THE APPROXN. OF WEAK AND STRONG DEGENERACY. NEGLECTING THE ENERGY DEPENDENCE OF THE SCREENING PARAMETER CAN LEAD TO FORBIDDINGLY LARGE ERRORS IN THE CALCN. OF THE KINETIC COEFFS. IN THE CASE OF SCATTERING OF CURRENT CARRIERS ON IMPURITY IONS.
FACILITY: FIZ. TEKH. INST. IM. IOFFE, LENINGRAD, USSR.

UNCLASSIFIED

FILIPCHIK, I. S.

SO: JPRS 55204
16 FEB 72

UDC: 616.31-082(-22)

ORGANIZATION OF STOMATOLOGICAL CARE FOR THE RURAL POPULATION

[Article* by K.M. Strelkovskiy, I.S. Filipchik, Khersonskaya Oblast Stomatologicheskaya Polyclinic (Chief physician: K.M. Strelkovskiy) and Khersonskaya Oblast Central Rayon Hospital (Chief physician: A.I. Guchemko), Khersonskaya Oblast; Moscow, Sovetskoye Zdravoohraneniye, Russian, No 1, 1972, submitted 20 July 1971, pp 29-32]

The grand and creative program approved by the 24th Congress of the CPSU sets large and responsible objectives before Soviet medicine. One of them is continued development and improvement of specialized care, including stomatology, in rural areas.

Organization of stomatological care for the rural population lags considerably in scope and quality from that provided for urban residents. There are very few data on this score in the literature. N.Ya. Arhanskiy, U. Vorob'yev and L. Nankin, M.I. Lapidus, O.G. Ryabyshenko and P.I. Fivchuk, M.M. Slutskaya and Yu.G. Komelechuk discuss the activity of physicians in stomatological offices of district and rayon hospitals, as well as matters pertaining to further improvement of stomatological care for the rural population but by far not comprehensively.

In rural areas, the main organizational centers for this type of care are stomatology offices, and in larger rayon there are stomatological departments in central rayon hospitals. One, rarely two doctors are employed in stomatology offices of district hospitals. In some collective farms there are stomatology offices maintained at their expense. The doctors in district hospital and farm offices are not supplied with intermediate and junior medical assistants.

The staff of stomatological institutions in rural areas does not make it possible to pursue regularly scheduled dental prophylaxis for the child population to the extent that is done in cities. In areas with a predominantly rural population, which include Khersonskaya Oblast, municipal stomatological institutions are not in a position to render appreciable aid, as proposed by N.Ya. Arhanskiy, for regular dental prophylaxis in rural areas, since there

*Submitted for the purpose of discussion -- Editor.

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UDC 536.244

DYBAN, YE. P., Doctor of Technical Sciences, Professor, EPIK, E. YA., Candidate of Technical Sciences, MAZUR, A. I., FILIPCHUK, V. YE., Engineers

"Heat Exchange in the Presence of Jet Blowing of the Intake Edge of a Turbine Vane"

Minsk, Izvestiya vysshikh uchebnykh zavedeniy -- Energetika, No 5, 1972, pp 90-96

Abstract: The results of studying local heat exchange on the inside surface of the cavity of the intake edge during symmetric rotation of a plane air jet ($h/B > 1$, $\bar{b} > 0.3$ [$\bar{b} = b/B$ = the relative width of the slot in the nose of the deflector; h/B is the relative depth of the cavity of the intake edge]) were discussed previously [Ye. P. Dyban, et al., IFZh, No 5, 1969]. Now, experimental data are presented on heat exchange in the cavity of the intake edge for asymmetric rotation of the plane jet and also for discharge of a number of circular jets into it. The device described by Ye. P. Dyban, et al. was used for the experiments, and the required visual observations were made in a circulating system filled with water with the addition of small amounts of colored aluminum [Ye. P. Dyban, et al., IFZh, Vol XX, No 6, 1971]. The experimental data cover the heat exchange intensity in the cavity of the intake edge of the turbine vane of the deflector type blown by a plane air jet for $\bar{b} < 0.27$ and the series 1/2

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DYBAN, YE. P., et al, Izvestiya vysshikh uchebnykh zavedeniy -- Energetika, No 5, 1972, pp 90-96

of circular jets. The nature of the distribution of the local heat exchange coefficients along the perimeter of the cavity of the intake edge depends on the ratio of the jet and cavity dimensions. A comparison of the heat exchange intensity caused by the plane and a series of circular jets among themselves and with the known data of other analogous studies was made.

The intensity of the heat exchange when blowing the edge with a series of circular jets and fixed values of l/b equal to the actual and equivalent widths and identical air flow rates ($Re_l = idem$) is higher than when blowing with a plane jet. For example, when $l/b = 10$ and $Re_l = 10^5$ and $6 \cdot 10^5$, the Nusselt numbers for the circular jets exceed those for the plane jet by an average of 26 and 47% respectively under the experimental conditions. As l/b is increased, that is, the length of the cooled surfaces increased, under other equal conditions the difference in heat exchange levels decreases, and when $l/b = 20$ the plane jet is in practice equivalent to the series of circular jets having equal equivalent width.

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Acc. Nr: **AF0034393**

Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 2, pp **102-107**

! PENICILLINASE-PRODUCING GRAMNEGATIVE BACILLI AS ETIOLOGICAL FACTORS OF THE URINARY TRACT INFECTIONS

Bobrovskiy, M.; Dzerzhanovskaya, D.; ~~Filipchuk, Ya.~~

Microbiological Chair of Medical Academy of Belostock, Poland

Penicillinase activity of 73 strains of E. coli, Klebsiella and Proteus isolated from urine was determined. No correlation between the enzymatic activity of a particular strain and its ability to cause severe infections of the urinary tract was found. It has been demonstrated that β -lactamase formation is not the only mechanism of the insensitivity of gramnegative bacteria to penicillins and the intrinsic resistance, as well as penicillinase production should also be regarded. It has also been observed that some considerable differences occur in substrate specificity and affinity of penicillinases from different bacterial species.

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UDC 581.163+576.312.32+575.23

DISHLER, V. YA., FILIPEKA, V. F., and NAGLE, E. F., Institute of Biology,
Latvian Academy of Sciences

"Effect of Ionizing Radiation on Barley Fertility and Frequency of Chromosome
Aberrations in Meiosis"

Riga, Izvestiya Akademii Nauk Latvyskoy SSR, No 7, 1973, pp 42-46

Abstract: Air-dried seeds of the Maya spring barley variety were irradiated with fast neutrons (0.05 to 0.8 krad) or gamma rays (0.5 to 8.0 kr) to determine which form of irradiation produces the largest number of chromosome translocations. Increasing the dose of fast neutrons produced a linear increase in the number of H_1 plants with semisterile central heads and sterile flowers, whereas sterility was not affected significantly by increasing the dose of gamma rays. Plants with completely sterile heads were found when the seeds were irradiated with fast neutrons at 0.2 krad or more or gamma rays at 2 kr or more. The frequency of cytogenetic injuries in meiotic cells after irradiation was 9.1 to 19.9% in prophase-metaphase I and 0.2 to 2.9% in anaphase I. The frequency of injury was independent of the kind and dose of radiation used. Fast neutrons at 0.1 to 0.4 krad and gamma rays at 8.0 kr induced the largest number of major chromosome translocations.

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UDC: 548.736.6

FILIPENKO, A. A., LITVIN, B. N., POBEDINSKAYA, Ye. A., and EELOV, A. V.

"Hydrothermal Synthesis and X-Ray of Barium Silicates"

Moscow, Kristallografiya, Vol. 15, No. 4, 1970, pp 863-865

Abstract: As opposed to similar calcium systems, which have been thoroughly researched, only one paper has been devoted to the $\text{BaO-SiO}_2\text{-H}_2\text{O}$ system in the last 30 years. This brief communication describes experimentation performed to synthesize barium silicates for the purpose of obtaining crystals good enough for x-ray analysis. The synthesis was conducted in autoclaves with a temperature gradient of 20-30° C. The original chemical reagents were barium hydroxide and x-ray amorphous silica; the aqueous solution of $\text{Ba}(\text{OH})_2$ had the double function of a silica solution and a supply of barium. A table is given of 17 attempts to obtain the proper composition for crystallization. The results of the x-ray analysis of the various crystal phases are given, and there is a second table of the morphological and x-ray analysis details. The authors express their gratitude to T. I. Ivanova for her assistance with the measurements.

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1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THE FORMATION OF UNIFORM DOSE FIELDS OF HIGH ENERGY BREMSSTRAHLUNG
BY MEANS OF EQUILIZING TARGETS -U-
AUTHOR--(04)-KOVALEV, V.P., KHARIN, V.P., GORDEYEV, V.V., FILIPENOK, S.P.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 5, PP 49-54
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BREMSSTRAHLUNG, NEUTRON RADIATION, RADIOTHERAPY, ANGULAR
DISTRIBUTION, ALUMINUM, FILTRATION, COPPER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0275 STEP NO--UR/0241/70/015/005/0049/0054
CIRC ACCESSION NO--AP0120964
UNCLASSIFIED

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PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120964

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS OF EXPERIMENTAL STUDIES OF ANGULAR DISTRIBUTIONS OF BREMSSTRAHLUNG AND NEUTRON RADIATION FOR TARGETS FROM COPPER WHICH WAS SELECTED AS A "MODEL" MATERIAL ARE DEPICTED. IN ALTERATION OF THE FORM OF THE TARGET THERE IS SEEN A DISTINCT EFFECT OF "EQUILIZATION" OF THE FIELD OF BREMSSTRAHLUNG. THE PAPER CARRIES THE RESULTS OF EXPERIMENTAL VERIFICATION OF THE INFLUENCE OF THE FACTOR OF ACCUMULATION ON THE DOSE VALUE FOR A COMBINATION OF COPPER TARGET AND ALUMINUM FILTER. THE EXPERIMENTAL RESULTS OF MEASUREMENT OF ANGULAR DISTRIBUTIONS OF NEUTRONS ARE IN ACCORDANCE WITH THE THEORY OF PHOTONEUTRON REACTIONS. THE EFFECT OF THE FORM OF THE TARGET ON THE ANGULAR DISTRIBUTION OF NEUTRONS IS DEMONSTRATED.
FACILITY: INSTITUT MEDITSINSKOY RADIOLOGII AMN SSSR.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--HIGH TEMPERATURE REGION OF THE IRON CARBON PHASE DIAGRAM -U-
AUTHOR-(02)-FILIPGOV, E.S., KRESTOVNIKOV, A.N.
COUNTRY OF INFO--USSR F
SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MET. 1970, 13(3), 120-2
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--IRON, CARBON, HIGH TEMPERATURE EFFECT, NICKEL, MOLYBDENUM,
PHASE DIAGRAM, LIGHT EMISSION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1548 STEP NO--UR/0148/70/013/003/0120/0122
CIRC ACCESSION NO--AP0125174
UNCLASSIFIED

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PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0125174

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO FACILITATE THE INTERPRETATION OF THE EXPTL. RESULTS OF THE INTENSITY OF THE LIGHT EMISSION VS. TEMP. OR C CONTENT IN TERMS OF TRANSITION STRUCTURES IN THE FE-C SYSTEM AT 1150-1500DEGREES (E. S. FILIPOV, ET AL., 1969), ANALOGOUS NI-MO SYSTEM WAS STUDIED. FACILITY: MOSK. INST. STALI SPLAVOV, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 8.74

KOLYADA, A. A., FILIPOVETS, F. S.

"On Finding the Bases of Systems of Residual Classes"

Minsk, Teoriya i primeneniye mat. mashin--sbornik (Theory and Application of Mathematical Machines--collection of works), Belorussian University, 1972, pp 16-28 (from RZh-Kibernetika, No 5, May 73, abstract No 5V749 by the authors)

Translation: The conventional mathematical apparatus for finding specific systems of residual classes with respect to predetermined weights, including negative ones, is generalized and improved. Arguments are presented which prove the effectiveness of this apparatus.

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UDC 619:615.92:636.22/.28

GOLOSNIITSKIY, A. K. Professor, SHCHERBAN', N. F., Doctor of Veterinary Sciences, North Caucasus Zonal Scientific Research Veterinary Institute, SKARGIN, V. I., Chief Veterinary Physician, and FILIPOVICH, N. P., Director of the Veterinary Laboratory, Chertkovskiy Rayon, Rostovskaya Oblast

"On the Toxicology of Chlorophos"

Moscow, Veterinariya, No 4, 1973, p 102

Abstract: Studies were conducted on 26 bulls in an artificial insemination program following intoxication with chlorophos. On that day the barn had first been disinfected with 3% sodium hydroxide, and in the afternoon the bulls were treated with 3% chlorophos solution. Due to falling temperature the barn was closed and soon became filled with chlorophos vapors. The bulls developed the following symptoms: decreased heart rate, salivation, skeletal muscle tremor, incoordination, depressed body temperature, respiratory difficulties, convulsions, and refused feed; 10 of the bulls died. Autopsies disclosed cyanosis of the mucous membranes, congestion of liver, spleen, and especially of the lungs; gall bladders were enlarged in most of the animals, and epicardial and endocardial hemorrhages were present. On diagnosis treatment with atropine sulfate and intravenous glucose and caffeine was instituted. Blood levels of

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